CLAIMS

What is claimed is:

1. A vehicle information system comprising:

a computing system adapted to run an operating system and a plurality of
5   applications,

at least one vehicle application operable to provide policy processing of at least one

parameter, the at least one vehicle application being executable by the computing system;

an access-layer application executable by the computing system, the access-layer

application having a first interface adapted to communicate with the vehicle application, and a
10   second interface adapted to communicate with the operating system,

a vehicle-application database operable to house information for processing at least

one parameter passed between first and second interfaces, the access-layer application

operable obtain from the vehicle-application database the information for processing the at

least one parameter, and operable to process the at least one parameter as a function of the
15   information obtained from the vehicle-application database so as to pass the processed at

least one parameter between the first and second interfaces in a form commensurate with

the first and second interfaces; and

a communication adapter operable to pass the at least one parameter between the

second interface and the vehicle controller.

20   2. The vehicle information system as recited in claim 1, wherein the information houses in the

vehicle-application database comprises information for encoding and decoding the at least one

parameter passed between the first and second interfaces.

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3. The vehicle information system as recited in claim 1, wherein the second interface comprises an vehicle-controller-abstraction interface, and wherein the vehicle-controller-abstraction interface abstracts from the vehicle controller a message protocol used by the vehicle controller, thereby allowing the access-layer application to be vehicle-controller independent.

4. The vehicle information system as recited in claim 1, wherein the second interface comprises an operating-system-abstraction interface, and wherein the operating-system-abstraction interface abstracts operating system and computing system parameters, thereby allowing the access-layer application to be operating-system independent.

5. The vehicle information system as recited in claim 1, wherein the first interface comprises an client-application-abstraction interface, and wherein the client-application-abstraction interface abstracts client application parameters, thereby allowing the access-layer application to be client-application independent.

6. The vehicle information system as recited in claim 5, wherein the client application parameters comprise client language used for displaying and inputting the information in the vehicle-application database.

7. The vehicle information system as recited in claim 1, wherein the access-layer application comprises a third interface, wherein the third interface comprises a vehicle-programming-abstraction interface, and wherein the vehicle-programming-abstraction interface abstracts programming parameters used for programming the vehicle controller.

8. The vehicle information system as recited in claim 1, further comprising an operating system socket interface for local and remote communication with the operating system.

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9. The vehicle information system as recited in claim 1, wherein the vehicle-application database comprises:

vehicle information associated with the vehicle controller;

message information for querying and extracting information from the vehicle

5   controller;

datapoints for interpreting, organizing, and processing information from the vehicle controller;

trouble codes for supporting diagnostics of the vehicle controller;

fault groups for organizing and supporting the trouble codes; and

10   scaling functions for support formatting and retrieval of values for the vehicle application.

10. The vehicle information system as recited in claim 9, wherein the datapoints, trouble codes, and fault group are grouped into logical category groups.

11. A vehicle information system comprising:

15   a computing system adapted to run an operating system and a plurality of applications,

at least one vehicle application operable to provide policy processing of at least one parameter, the at least one vehicle application being executable by the computing system;

an access-layer application executable by the computing system, the access-layer

20   application comprising:

at least one logic module for processing the at least one parameter;

an application program interface adapted to provide a common interface for any of the at least one vehicle application and adapted to interface with the at least one logic module, and

an operating-system-abstraction interface adapted to interface with the at least one logic module and the operating system, the operating-system-abstraction interface abstracting operating system and computing system parameters, thereby allowing the access-layer application to be operating-system independent, and

a vehicle-application database operable to house information for processing at least one parameter passed between application program interface and operating-system-abstraction interface, the access-layer application operable obtain from the vehicle-application database the information for processing the at least one parameter, and operable to process the at least one parameter as a function of the information obtained from the vehicle-application database so as to pass the processed at least one parameter between the application program interface and operating-system-abstraction interface in a form commensurate with the application program interface and operating-system-abstraction interface; and

a communication adapter operable to pass the at least one parameter between the second interface and the vehicle controller.

12. The vehicle information system as recited in claim 11, wherein the information housed in the vehicle-application database comprises information for encoding and decoding the at least one parameter passed between the application program interface and operating-system-abstraction interface.

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13. The vehicle information system as recited in claim 11, wherein the operating-system-abstraction interface comprises an vehicle-controller-abstraction interface, and wherein the vehicle-controller-abstraction interface abstracts from the vehicle controller a message protocol used by the vehicle controller, thereby allowing the access-layer application to be vehicle-controller independent.

14. The vehicle information system as recited in claim 11, wherein the application program interface comprises an client-application-abstraction interface, and wherein the client-application-abstraction interface abstracts client application parameters, thereby allowing the access-layer application to be client-application independent.

15. The vehicle information system as recited in claim 14, wherein the client application parameters comprise client language used for displaying and inputting the information in the vehicle-application database.

16. The vehicle information system as recited in claim 11, wherein the access-layer application comprises a third interface, wherein the third interface comprises a vehicle-programming-abstraction interface, and wherein the vehicle-programming-abstraction interface abstracts programming parameters used for programming the vehicle controller.

17. The vehicle information system as recited in claim 11, further comprising an operating system socket interface for local and remote communication with the operating system.

18. The vehicle information system as recited in claim 11, wherein the vehicle-application database comprises:

          vehicle information associated with the vehicle controller;

message information for querying and extracting information from the vehicle controller;

datapoints for interpreting, organizing, and processing information from the vehicle controller;

5   trouble codes for supporting diagnostics of the vehicle controller;

fault groups for organizing and supporting the trouble codes; and

scaling functions for support formatting and retrieval of values for the vehicle application.

19. In a vehicle information system having a computing system adapted to run an operating

10   system and a plurality of applications, the plurality of applications, a computer readable medium comprising:

at least one vehicle application operable to provide policy processing of at least one parameter, the at least one vehicle application being executable by the computing system;

an access-layer application executable by the computing system, the access-layer

15   application having a first interface adapted to communicate with the vehicle application, and a second interface adapted to communicate with the operating system,

a vehicle-application database operable to house information for processing at least one parameter passed between first and second interfaces, wherein when executed by the computing system the access-layer application is operable to (i) obtain the at least one

20   parameter at the second interface from the vehicle controller via a communication adapter, (ii) obtain from the vehicle-application database the information for processing the at least one parameter, and (iii) process the at least one parameter as a function of the information obtained from the vehicle-application database so as to pass the processed at least one

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parameter between the first and second interfaces in a form commensurate with the first and second interfaces.

20. The vehicle information system as recited in claim 19, wherein the vehicle-application database comprises:

5   vehicle information associated with the vehicle controller;

message information for querying and extracting information from the vehicle controller;

datapoints for interpreting, organizing, and processing information from the vehicle controller;

10   trouble codes for supporting diagnostics of the vehicle controller;

fault groups for organizing and supporting the trouble codes; and

scaling functions for support formatting and retrieval of values for the vehicle application.

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